Evaluating the Maryland Department of Health and Mental Hygiene (DHMH) Response to Hurricane Katrina

Ronnie Huang

Capstone Presentation

May 10, 2006

MARYLAND
DEPARTMENT OF HEALTH
& MENTAL HYGIENE

JOHNS HOPKINS
BLOOMBERG
SCHOOL of PUBLIC HEALTH

Outline

- Background
- Objectives
- Methods
- Results
- Recommendations

Background: NIMS/ICS

- National Incident Management System (NIMS)
  - Standard incident management system for the management of all incidents.
- Incident Command System (ICS)
  - Provides basic functional structure

Background: Hurricane Katrina

- Damage cost: $75 billion[1]

- Total indirect and direct fatalities is 1,336[1]

- Over 1,900 still missing[2]

1. Brown DP, Rhome JR, Knabb RD. Tropical Cycle Report: Hurricane Katrina (Dec 2005). Available from the National Hurricane Center: http://www.nhc.noaa.gov/pdf/TCR-AL122005_Katrina.pdf
2. ABC News. Katrina's Missing Still Numbers in the Thousands: Nearly 2,000 People Still Missing in Louisiana; 132 Are Children. Retrieved on May 7, 2006 from http://abcnews.go.com/WNT/story?id=1668003&WNT=true

Background: DHMH Response

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Aug. 21	22	23	24	25	26	27
28	29 GULF COAST	30	31	Sept. 1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	Oct. 1
2	3	4	5	6	7	8
9	10	11	12	13	14	15

Background: DHMH Accomplishments

- Deployed 161 MPVC volunteers to Louisiana
  - Treated more than 6,200 Louisiana patients
- Recruited new volunteers into MPVC
- Coordinated with local health departments (LHD)
  - Provided 420 doses of Tetanus vaccine
  - Provided support for evacuees

Objectives

- Assess various aspects of the ORB's role in the Maryland DHMH Katrina relief efforts
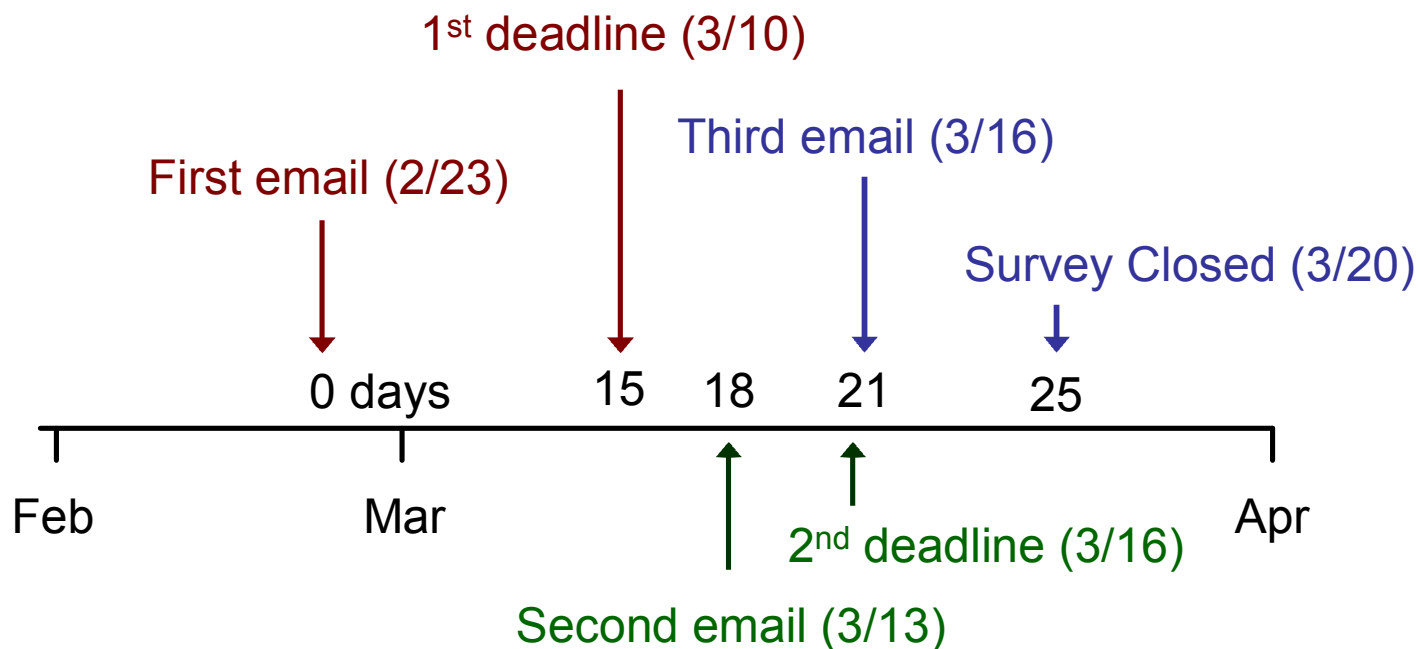- Assess the use of NIMS and ICS by the ORB

Methods 1

- Developed a questionnaire
  - Based on survey used by EMS in South Mississippi
  - Three parts
    - Part A: 11 yes/no or short answer questions
    - Part B: 35 ranking questions
    - Part C: 3 open-ended questions
- Sent the questionnaire to <u>all</u> 41 DHMH employees who participated in the ORB
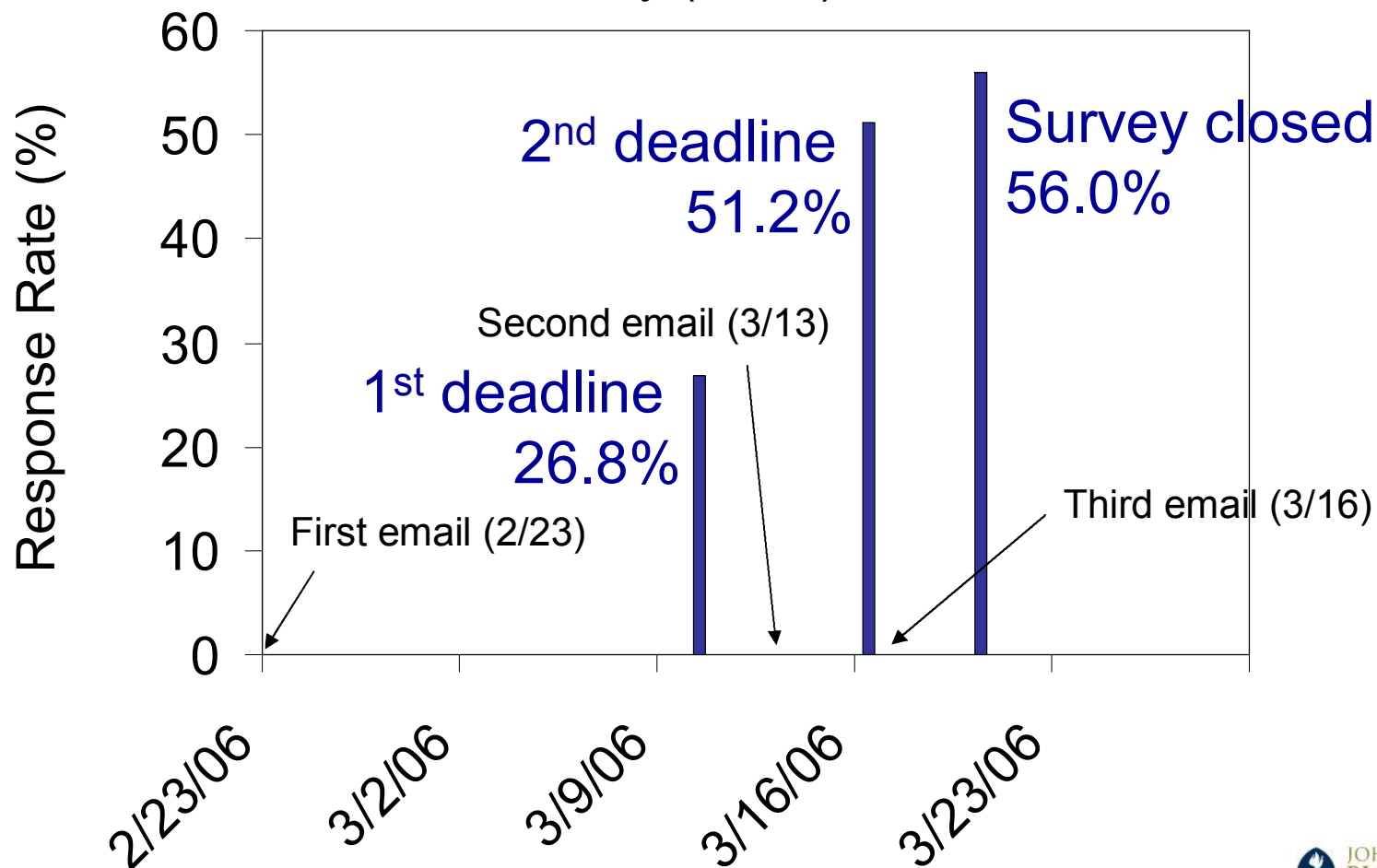
Methods 2

- Timeline of events

Results: Response Rate

Percent of DHMH Employees Responding to the Survey (N=41)

Results: Sample Description

Characteristic		n (%)
Department	Preparedness	6 (26.1)
	Non-preparedness	10 (43.5)
	DHMH	7 (30.4)
Felt they had a well-defined role	Yes	16 (69.6)
	No	7 (30.4)
Number participating in each phase	Immediate	11 (47.8)
	Activation	22 (95.7)
	Transition	16 (69.6)
	Recovery	10 (43.5)

Results: NIMS/ICS Training and Experience

Characteristic	Yes n (%)
Taken IS-700 course	9 (39.1)
IS-700 required as part of regular job	11 (47.8)
Taken part of an ICS for an exercise	15 (65.2)
Taken part of an ICS for a real incident	15 (65.2)

Results: Work Environment

Item	n	Avg. Rank. (SD)
Staff support	21	3.10 (1.22)
Work environment in the BRC	22	2.50 (1.30)
Amount of workspace in the BRC	22	2.27 (1.12)

Results: Coordination & Communication

Item	n	Avg. Rank. (SD)
Branch Chief cellular phones	10	4.10 (0.57)
Prepared email (internal)	23	4.09 (0.79)
Shift change meetings	19	3.95 (0.78)
Daily bulletin emails	20	3.70 (0.66)
Conference calls (intermed)	17	3.65 (0.79)
Conference calls (recovery)	13	3.62 (0.77)

Results: Overall Performance

Item	n	Avg. Rank. (SD)
Willingness to be a part of a future incident response	23	4.13 (1.14)
Overall performance of the ORB	22	3.77 (0.75)
Individual overall performance	21	3.67 (0.86)
Overall performance of the Executive ICS	16	3.06 (1.18)

Limitations

- Low response rate
    - Length of the survey
    - Survey sent out 6 months after the response
    - Recent changes
    - Not told that the survey was anonymous
- Non-response bias
- Survey design

Recommendations 1

- Ensure all preparedness employees take the following two courses: IS-700 and ICS-100

- Use the FY06 Training Requirements as a guide to ensure that public health personnel have taken all required courses

- Generate a list of DHMH employees who are needed and able to work during an incident response

- Require that all DHMH employees on the list take both the IS-700 and ICS-100 course

Recommendations 2

- Secure a larger room at the DHMH for use during an incident response
- Consistently hold more Branch chief shift change orientations as opposed to one-on-one orientations when working in shifts
- Utilize another means of communication besides conferences calls during the transition and recovery phases
- Establish the organizational responsibilities of the Executive ICS and the Office of Emergency Preparedness and Response

Closing Thoughts

- The ORB's role in the Maryland DHMH relief efforts was a success

- ICS was an effective way to handle Hurricane response

- Changes can still be made to improve upon future responses

Thank You's

- Dr. Marsha Davenport
- Dr. Lynn Goldman
- Dr. Ibrahim
- Dipti Shah
- Dr. Al Romanosky
- Sherrie Harris
- Chet Roebuck

Questions

"Y'KNOW... I HAVEN'T THOUGHT ABOUT BRAD AND ANGELINA IN DAYS..."

Extra: Early vs. Late Responders

Characteristic		Early (N=11)	Late (N=12)
Department	Preparedness	4 (36.4)	3 (25.0)
	Non-preparedness	0 (0.0)	6 (50.0)
	DHMH	7 (63.6)	3 (25.0)
Felt they had a well-defined role	Yes	5 (45.5)	11 (91.7)
	No	6 (54.5)	1 (8.3)
Number participating in each phase	Immediate	5(45.5)	6 (50.0)
	Activation	10 (90.9)	12 (100.0)
	Transition	6 (54.5)	10 (83.3)
	Recovery	3 (27.3)	7 (58.3)
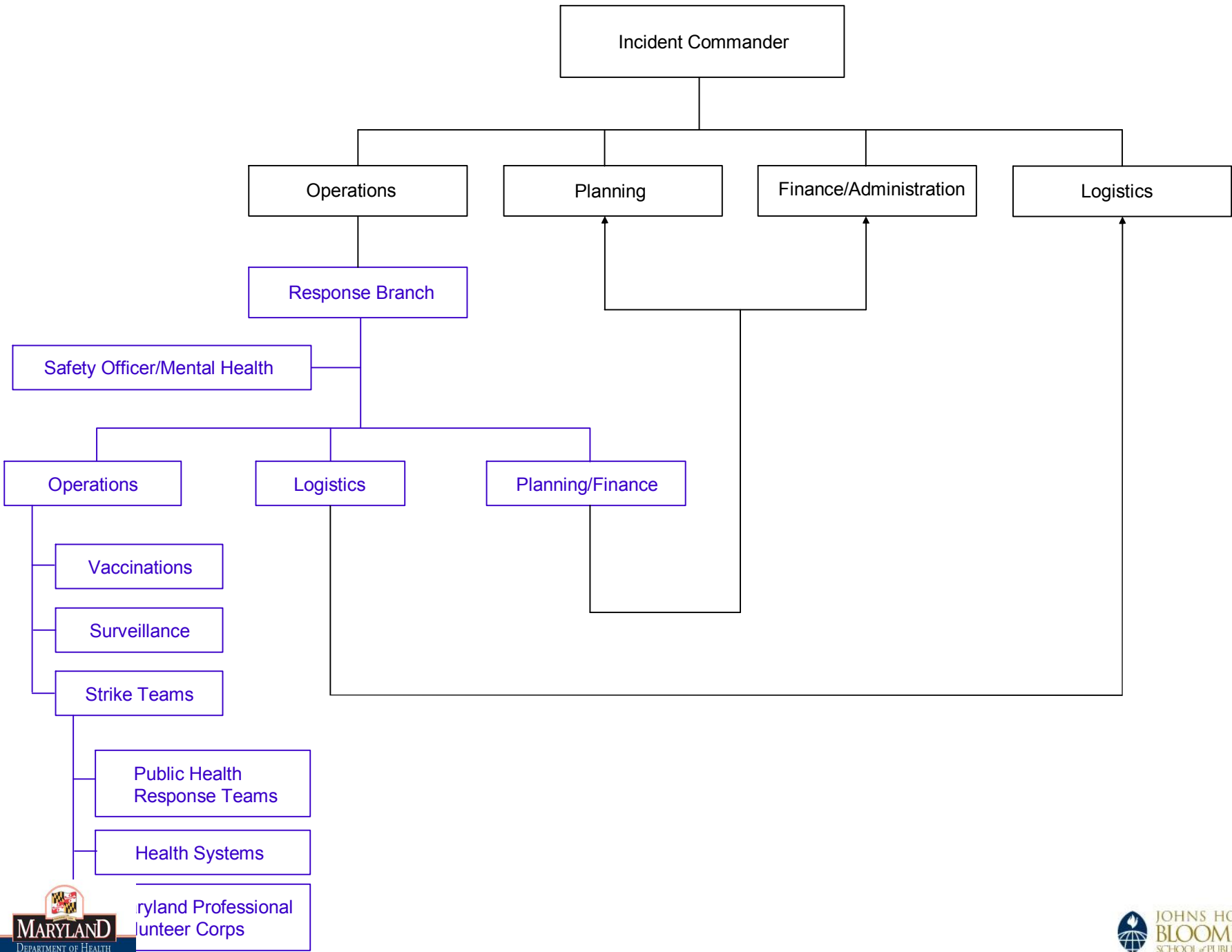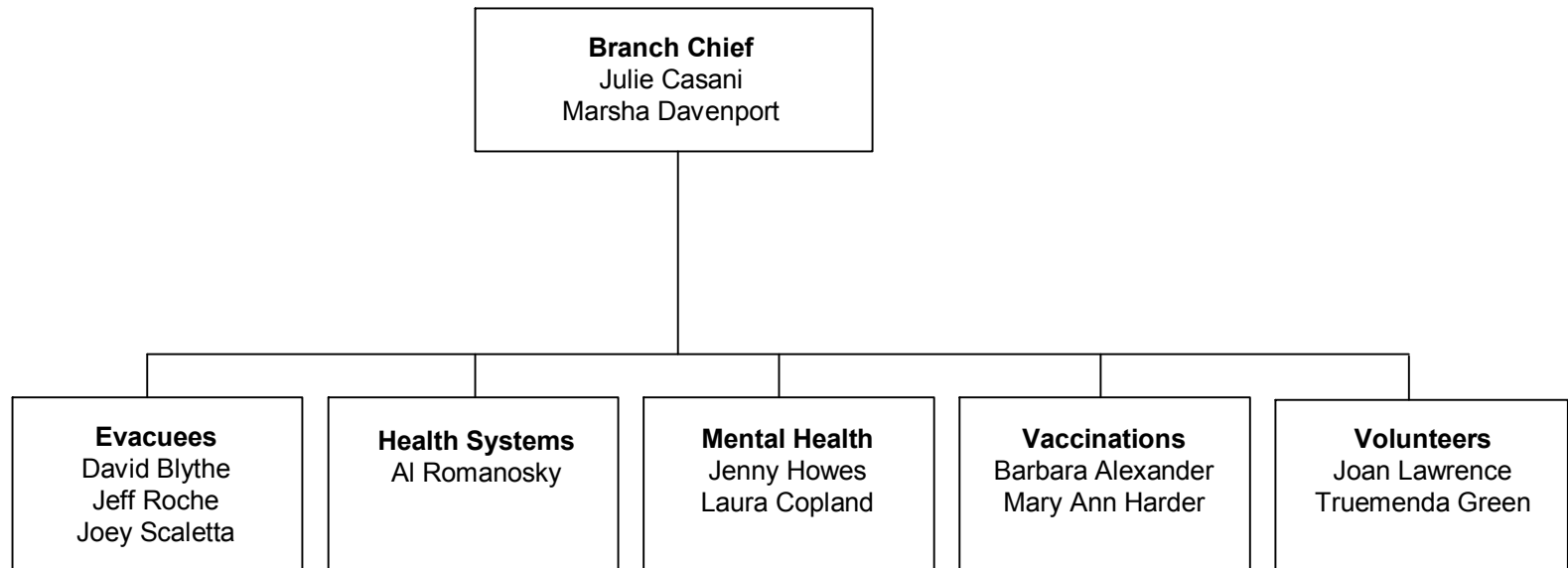
Extra: What worked well (Q47)?

Category	Number of Comments (%)
Leadership	5 (13.9)
Communications	11 (30.6)
Organization	10 (27.8)
Staff	2 (5.5)
No comment or N/A	6 (16.7)
Not helpful	2 (5.5)
Total35	36

Extra: What didn't work well (Q48)?

Category	Number of Comments (%)
Leadership	4 (9.3)
Communications	9 (21.0)
Organization	8 (18.6)
Staff	1 (2.3)
Environment	7 (16.3)
Training/Preparation	4 (9.3)
Executive ICS	5 (11.6)
No comment or N/A	4 (9.3)
Not helpful	1 (2.3)
Total	43

Extra: Additional Comments (Q49)

Category	Number of Comments (%)
Leadership	3 (10.0)
Communications	1 (3.3)
Organization	3 (10.0)
Staff	4 (13.3)
Training/Preparation	2 (6.8)
Technology	1 (3.3)
Survey Design	1 (3.3)
No comment of N/A	15 (50.0)
Total	30